

SEQUENCE LISTING

| | | |
|----------------|-------------------------------------------------------------------|----|
| <110> | Ruppert, J. Michael Engler, Jeffrey Allen | |
| <120> | Krüppel-Like Transcriptional Factor KLF4/GKLF and Uses Thereof | |
| <130> | D6236CIP2 | |
| <141> | 2004-02-11 | |
| <150> | US 10/194,527 | |
| <151> | 2002-07-12 | |
| <160> | 8 | |
| <210> | 1 | |
| <211> | 13 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | phosphorylated <i>Bst</i> XI adaptor | |
| <400> | 1 | |
| tcagttactc agg | | 13 |
| <210> | 2 | |
| <211> | 17 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | phosphorylated <i>Bst</i> XI adaptor | |

| | | |
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| <400> | 2 | |
| cctgagtaac | tgacaca | 17 |
| <210> | 3 | |
| <211> | 20 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | PCR primer used for recovery of proviral inserts | |
| <400> | 3 | |
| cctcactcct | tctctagctc | 20 |
| <210> | 4 | |
| <211> | 23 | |
| <212> | DNA | |
| <213> | Artificial sequence | |
| <220> | | |
| <223> | PCR primer used for recovery of proviral inserts | |
| <400> | 4 | |
| aacaaattgg | actaatcgat acg | 23 |
| <210> | 5 | |
| <211> | 2639 | |
| <212> | DNA | |
| <213> | <i>Homo sapiens</i> | |
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| <223> | cDNA sequence of <i>GKLF</i> | |
| <400> | 5 | |
| tcgaggcgac | cgcgacagtg gtgggggacg ctgctgagtg gaagagagcg | 50 |

| | | | | | |
|-------------|-------------|------------|-------------|-------------|------|
| cagccccggcc | accggaccta | cttactcgcc | ttgctgattg | tctatTTTTg | 100 |
| cgtttacaac | ttttctaaga | acttttgtat | acaaaggaac | tttttaaaaa | 150 |
| agacgcttcc | aagttatat | taatccaaag | aagaaggatc | tcggccaatt | 200 |
| tggggTTTTg | ggttttggct | tcgtttcttc | tcttcgttga | ctttgggggtt | 250 |
| caggtgcccc | agctgcttcg | ggctgcccag | gaccttctgg | gccccacat | 300 |
| taatgaggca | gccacctggc | gagtctgaca | tggctgtcag | cgacgcgctg | 350 |
| ctcccatctt | tctccacgtt | cgcgtctggc | ccggcgggaa | gggagaagac | 400 |
| actgctcaa | gcaggtgccc | cgaataaccg | ctggcgggag | gagctctccc | 450 |
| acatgaagcg | acttccccca | gtgcttcccc | gccgccccta | tgacctggcg | 500 |
| gcggcgaccg | tggccacaga | cctggagagc | ggcggagccg | gtgcggcctg | 550 |
| cggcggtagc | aacctggcgc | ccctacctcg | gagagagacc | gaggagtcca | 600 |
| acgatctcct | ggacctggac | tttattctct | ccaattcgct | gacccatcct | 650 |
| ccggagtcag | tggccgccac | cgtgtcctcg | tcagcgtcag | cctcctcttc | 700 |
| gtcgtcgccg | tcgagcagcg | gccctgccag | cgcgcctcc | acctgcagct | 750 |
| tcacctatcc | gatccggggc | gggaacgacc | cgggcgtggc | gccgggcggc | 800 |
| acgggcggag | gcctcctcta | tggcagggag | tccgctcccc | ctccgacggc | 850 |
| tcccttcaac | ctggcggaca | tcaacgacgt | gagccccctg | ggcggccttcg | 900 |
| tggccgagct | cctgcggcca | gaattggacc | cgggtgtacat | tccgccgcag | 950 |
| cagccgcagc | cgccaggtgg | cgggctgatg | ggcaagtctg | tgctgaaggc | 1000 |
| gtcgttgagc | gccccctggc | gcgagtacgg | cagcccgtcg | gtcatcagcg | 1050 |
| tcagcaaagg | cagccctgac | ggcagccacc | cggtggtggt | ggcgccttac | 1100 |
| aacggcgggc | cgccgcgcac | gtgccccaa | atcaagcagg | aggcggctct | 1150 |
| ttcgtgcacc | cacttgggcg | ctggaccccc | tctcagcaat | ggccaccggc | 1200 |
| cggctgcaca | cgacttcccc | ctggggcggc | agctccccag | caggactacc | 1250 |
| ccgaccctgg | gtcttgagga | agtgttgagc | agcagggact | gtcaccctgc | 1300 |
| cctgccgctt | cctcccggct | tccatcccca | cccggggccc | aattacccat | 1350 |
| ccttcctgcc | cgatcagatg | cagccgcaag | tcccgccgct | ccattaccaa | 1400 |
| gagctcatgc | caccgcgttc | ctgcatgcc | gaggagccca | agccaaagag | 1450 |
| gggaagacga | tcgtggcccc | ggaaaaggac | cgccaccac | acttgtgatt | 1500 |
| acgcgggctg | cggcaaaaacc | tacacaaaga | gttcccatct | caaggcacac | 1550 |
| ctgcgaaccc | acacaggtga | gaaaccttac | cactgtgact | gggacggctg | 1600 |
| tggatggaaa | ttcgcccgtc | cagatgaact | gaccaggcac | taccgtaaac | 1650 |
| acacggggca | ccgcccgttc | cagtgccaaa | aatgcgaccg | agcatttttc | 1700 |
| aggctcgacc | acctcgcctt | acacatgaag | aggcattttt | aaatcccaga | 1750 |
| cagtggatat | gaccacact | gccagaagag | aattcagtat | tttttacttt | 1800 |
| tcacactgtc | ttcccgatga | gggaaggagc | ccagccagaa | agcactacaa | 1850 |
| tcatggtcaa | gttcccaact | gagtcacctt | gtgagtggat | aatcaggaaa | 1900 |
| aatgaggaat | ccaaaagaca | aaaatcaaag | aacagatggg | gtctgtgact | 1950 |
| ggatctttcta | tcattccaat | tctaaatccg | acttgaatat | tcctggactt | 2000 |
| acaaaatgcc | aaggggggtga | ctggaagtgt | tggatatcag | ggtataaatt | 2050 |
| atatccgtga | gttggggggag | ggaagaccag | aattcccttg | aattgtgtat | 2100 |
| tgatgcaata | taagcataaa | agatcacctt | gtattctctt | taccttctaa | 2150 |
| aagccattat | tatgatgtta | gaagaagagg | aagaaattca | ggtacagaaa | 2200 |
| acatgtttaa | atagcctaaa | tgatggtgct | tggtagtctt | tggttctaaa | 2250 |
| ggtaccaaac | aaggaagcca | aagttttcaa | actgctgcat | actttgacaa | 2300 |
| ggaaaatcta | tattttgtctt | ccgatcaaca | tttatgacct | aagtcaggta | 2350 |
| atatacctgg | tttacttctt | tagcattttt | atgcagacag | tctgttatgc | 2400 |
| actgtggttt | cagatgtgca | ataattttgt | caatggttta | ttcccaagta | 2450 |
| tgccttaagc | agaacaaatg | tgtttttcta | tatagtccct | tgccttaata | 2500 |
| aatatgtaat | ataaatTTaa | gcaaacgtct | atTTttgtata | tttgtaaact | 2550 |
| acaaagtaaa | atgaacattt | tgtggagttt | gtatttttgca | tactcaaggt | 2600 |
| gagaattaag | ttttaaataa | acctataata | ttttatctg | | 2639 |

<210> 6
 <211> 470
 <212> PRT
 <213> *Homo sapiens*

<220>
 <223> amino acid sequence of GKLF protein

<400> 6
 Met Ala Val Ser Asp Ala Leu Leu Pro Ser Phe Ser Thr Phe Ala
 5 10 15
 Ser Gly Pro Ala Gly Arg Glu Lys Thr Leu Arg Gln Ala Gly Ala
 20 25 30
 Pro Asn Asn Arg Trp Arg Glu Glu Leu Ser His Met Lys Arg Leu
 35 40 45
 Pro Pro Val Leu Pro Gly Arg Pro Tyr Asp Leu Ala Ala Ala Thr
 50 55 60
 Val Ala Thr Asp Leu Glu Ser Gly Gly Ala Gly Ala Ala Cys Gly
 65 70 75
 Gly Ser Asn Leu Ala Pro Leu Pro Arg Arg Glu Thr Glu Glu Phe
 80 85 90
 Asn Asp Leu Leu Asp Leu Asp Phe Ile Leu Ser Asn Ser Leu Thr
 95 100 105
 His Pro Pro Glu Ser Val Ala Ala Thr Val Ser Ser Ser Ala Ser
 110 115 120
 Ala Ser Ser Ser Ser Ser Pro Ser Ser Ser Gly Pro Ala Ser Ala
 125 130 135
 Pro Ser Thr Cys Ser Phe Thr Tyr Pro Ile Arg Ala Gly Asn Asp
 140 145 150
 Pro Gly Val Ala Pro Gly Gly Thr Gly Gly Gly Leu Leu Tyr Gly
 155 160 165
 Arg Glu Ser Ala Pro Pro Pro Thr Ala Pro Phe Asn Leu Ala Asp
 170 175 180
 Ile Asn Asp Val Ser Pro Ser Gly Gly Phe Val Ala Glu Leu Leu
 185 190 195

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Pro | Glu | Leu | Asp | Pro | Val | Tyr | Ile | Pro | Pro | Gln | Gln | Pro | Gln | 200 | 205 | 210 |
| Pro | Pro | Gly | Gly | Gly | Leu | Met | Gly | Lys | Phe | Val | Leu | Lys | Ala | Ser | 215 | 220 | 225 |
| Leu | Ser | Ala | Pro | Gly | Ser | Glu | Tyr | Gly | Ser | Pro | Ser | Val | Ile | Ser | 230 | 235 | 240 |
| Val | Ser | Lys | Gly | Ser | Pro | Asp | Gly | Ser | His | Pro | Val | Val | Val | Ala | 245 | 250 | 255 |
| Pro | Tyr | Asn | Gly | Gly | Pro | Pro | Arg | Thr | Cys | Pro | Lys | Ile | Lys | Gln | 260 | 265 | 270 |
| Glu | Ala | Val | Ser | Ser | Cys | Thr | His | Leu | Gly | Ala | Gly | Pro | Pro | Leu | 275 | 280 | 285 |
| Ser | Asn | Gly | His | Arg | Pro | Ala | Ala | His | Asp | Phe | Pro | Leu | Gly | Arg | 290 | 295 | 300 |
| Gln | Leu | Pro | Ser | Arg | Thr | Thr | Pro | Thr | Leu | Gly | Leu | Glu | Glu | Val | 305 | 310 | 315 |
| Leu | Ser | Ser | Arg | Asp | Cys | His | Pro | Ala | Leu | Pro | Leu | Pro | Pro | Gly | 320 | 325 | 330 |
| Phe | His | Pro | His | Pro | Gly | Pro | Asn | Tyr | Pro | Ser | Phe | Leu | Pro | Asp | 335 | 340 | 345 |
| Gln | Met | Gln | Pro | Gln | Val | Pro | Pro | Leu | His | Tyr | Gln | Glu | Leu | Met | 350 | 355 | 360 |
| Pro | Pro | Gly | Ser | Cys | Met | Pro | Glu | Glu | Pro | Lys | Pro | Lys | Arg | Gly | 365 | 370 | 375 |
| Arg | Arg | Ser | Trp | Pro | Arg | Lys | Arg | Thr | Ala | Thr | His | Thr | Cys | Asp | 380 | 385 | 390 |
| Tyr | Ala | Gly | Cys | Gly | Lys | Thr | Tyr | Thr | Lys | Ser | Ser | His | Leu | Lys | 395 | 400 | 405 |
| Ala | His | Leu | Arg | Thr | His | Thr | Gly | Glu | Lys | Pro | Tyr | His | Cys | Asp | 410 | 415 | 420 |
| Trp | Asp | Gly | Cys | Gly | Trp | Lys | Phe | Ala | Arg | Ser | Asp | Glu | Leu | Thr | 425 | 430 | 435 |
| Arg | His | Tyr | Arg | Lys | His | Thr | Gly | His | Arg | Pro | Phe | Gln | Cys | Gln | 440 | 445 | 450 |
| Lys | Cys | Asp | Arg | Ala | Phe | Ser | Arg | Ser | Asp | His | Leu | Ala | Leu | His | | | |

| | | | |
|---------------------|-----|-----|-----|
| | 455 | 460 | 465 |
| Met Lys Arg His Phe | | | |
| | 470 | | |

| | |
|-------|---------------------|
| <210> | 7 |
| <211> | 6 |
| <212> | RNA |
| <213> | Artificial sequence |

| | |
|-------|------------------------|
| <220> | |
| <223> | polyadenylation signal |

| | | |
|--------|---|---|
| <400> | 7 | |
| aauaaa | | 6 |

| | |
|-------|---------------------|
| <210> | 8 |
| <211> | 7 |
| <212> | DNA |
| <213> | Artificial sequence |

| | |
|-------|-------------------------------------------------|
| <220> | |
| <223> | minimal essential binding site for GKLF protein |

| | | |
|---------|---|---|
| <400> | 8 | |
| rrggygy | | 7 |